

REMARKS

A. Introduction

Claims 45-77 were presented for examination.

Claims 45-77 were rejected under 35 U.S.C. § 102(b) as being anticipated by Drury, et al., U.S. Patent No. 4,312,152.

Withdrawn claims 1-10 have been cancelled per the Examiner's instructions, without prejudice to the Applicant's right to refile these claims in a divisional or continuation application.

Claim 61 has been amended to correct a punctuation error.

B. Rejection of Claims 45-77 under 35 U.S.C. § 102(b)

The Examiner has rejected each of the claims 45-77 under 35 U.S.C. § 102(b) on the basis that Drury, et al., U.S. Patent No. 4,312,152 discloses each element of those claims. Applicant respectfully disagrees and traverses that rejection. It is well established that an anticipation occurs *only* if a single source of prior art (e.g., a single reference) "explicitly or inherently discloses *every limitation* recited in the claims."¹ Drury does not disclose every limitation recited in the claims, each of the claims which will be addressed more fully below.

Claims 45, 53, 61

Independent claims 45 and 53 recite an irrigation method that includes the step of supplying irrigation water into a panel of porous material extending substantially

¹ *State Contracting & Eng'g Corp. v. Condotte Am., Inc.*, 346 F.3d 1057, 1068 (Fed. Cir. 2003) (quoting *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997)); *Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc.*, 726 F.2d 724, 726-27 (Fed. Cir.

throughout the root zone of a planting area to be irrigated. Independent claim 61 recites a “substantially continuous panel of porous material extending throughout the planting area, said porous material having spaces allowing movement of irrigation water through said panel and trapping of air within said panel.” Claim 61 further recites that “said spaces” are “of sufficient size to allow plant roots to grow therethrough.”

The porous nature of the material both facilitates distribution of air and water throughout the porous material itself, and enables plant roots to grow *into* the porous material, providing stability to the plants. *See Application, at ¶¶ 0025, 0051.* Indeed, the porous structure of the material enables the claimed panels to act as a growth matrix for the plants.

Drury does not disclose panels of *porous* material. Rather, Drury discloses panels or pallets 34 preferably made of “*closed cell* foamed plastic material.” Col. 3, lines 10-12; col. 6, lines 6-8. The McGraw-Hill Dictionary of Scientific and Technical Terms defines “closed-cell foam” as “a cellular plastic in which there is a predominance of noninterconnecting cells.” By contrast, it defines “open-cell foam” as “[f]oamed material, natural or synthetic, rigid or flexible, organic or metallic, in which there is interconnection between the cells.”

It is clear that Drury does not disclose or anticipate a panel of porous material that encourages the roots of the plant to grow into the panel material. In fact, Drury teaches away from such root growth. One of Drury’s objects is to provide “a method of hydroponic growing of plants” that involves transferring seed blocks “to a first group of

1984) (“It is hornbook law that anticipation must be found in a single reference, device or process.”).

buoyant pallets,” allowing the plants to grow until they reach a “predetermined stage,” and then transferring the plants “to an additional group of pallets,” and repeating these steps multiple times “until the plants reach a mature stage ready for harvest.” Col. 4, lines 6-22. Drury also emphasizes that “the pallets can be reused for a large number of successive crops.” Col. 6, lines 13-15. The plants are grown in seed blocks placed in holes spaced in patterns in the pallet. When the plants outgrow one selected spacing pattern, they are readily and precisely transferred to another pallet having a selected pattern of greater spacing. *See* Drury, Abstact.

If the pallet were made of a porous material which allowed the growth of roots therethrough, the plants could not be readily and precisely removed. Instead, removal of the plants would cause damage to the pallet and/or the plant root system. It is clear that Drury discloses a porous, closed-cell foam pallet or panel so that plants cannot grow into the panel material. Figure 8 in the Drury patent shows that the plant roots, instead of growing into the panel, will grow through the bottom of the hole and around the panel. Using a porous or open-cell foam that would form a matrix for root growth would defeat one of Drury’s principle objects.

Although unlikely, perhaps the Examiner is arguing that the panel in Drury is porous because it has holes created by the removal of punch-out plugs 37. these holes 37 (Fig. 2) are created by pressing a solid pallet against a “press-plate as large as the pallet and having a number of cutters equal to the desired number of plugs and arranged in a predetermined plug pattern.” Col. 6, lines 23-28.

But these holes 37 are much too large to render the pallet *porous*. Drury teaches that “[t]he size of each plug is determined by the size of a conventional seed block 36

intended for insertion in each hole 37 in the pallet resulting when the corresponding punch-out plug is removed," and then states that "a typical seed block is approximately 38 mm (1½ inch) high and 25 mm (1 inch) on a side, and the corresponding plug is a cylinder having a diameter of approximately 44 mm (1¾ inch)." Col. 6, lines 35-43.

Drury's holes are much too big to justify a characterization of Drury's panels as being made of "porous material." The Random House Unabridged Dictionary defines "porous" as "full of pores" and a "pore" as "a minute opening or orifice, as in the skin or a leaf, for perspiration, absorption, etc." Holes having diameters 1¾ inches wide hardly constitute "minute openings."

In addition, Drury does not disclose the elements of distributing the irrigation water substantially throughout the panel or moving the water through said spaces throughout said porous material of said panel. To the contrary, the panel or pallet in Drury is placed in a trough and the trough is filled with liquid nutrient on which the pallet floats. *See* Drury, Col. 7, lines 62-67 and Fig. 6A. Consequently, liquid nutrient in Drury is below the panel as opposed to being distributed substantially throughout the panel. If the liquid nutrient was distributed substantially throughout the panel, it would cause the panel to sink.

Finally, Drury does not disclose an irrigation method or apparatus which has the element of "trapping air in spaces throughout said panel's porous material so as to create available air for plant roots in the planting area." In fact, the panel disclosed in Drury does not trap air at all. In order to get air to the plant roots, the liquid nutrient or water is periodically "drained from the container, thereby exposing the plant roots to the air space below the panels. *See* Drury, Col. 8, lines 2-9 and Fig. 6B.

Claim 61 additionally recites “a fluid charge inlet associated with the panel.” Drury discloses an inlet 26 that is embedded in the trough 11, but not in the panel 34. Drury’s panels 34 float within the trough 11.

In view of the foregoing, Applicant respectfully asks that the rejection of claims 45-77 be withdrawn.

Claims 46, 54, 62

Claims 46, 54 and 62 of the present Applicant all require that the panel of porous material be made of webbed material. For Drury to anticipate claim 46, 54 or 62, it must disclose not only all of the elements recited in claim 45, 53 and 61, respectively, but also that the pallet or panel be made of webbed material.

The undersigned has searched Drury for such a disclosure and cannot find it there. In reference to Fig. 2, Drury discloses a flat grid 38 with criss-cross bars 39 or woven screen or netting but this flat grid is not the panel. Drury does not disclose that its *pallets or panels* are made of a webbed material. For this additional reason, Applicant respectfully asks that the rejection of claims 46, 54, and 62 be withdrawn.

Claims 47, 55, 63

Claim 47, 55, and 63 recite that the “porous material is open cell foam material.” For Drury to anticipate claims 47, 55 and 63 it must disclose not only all of the elements recited in claims 45, 53 and 61, respectively, but also that the panel made is open cell foam material.

As discussed above, Drury discloses panels made of closed-cell foam material, not open-cell foam material. For this additional reason, Applicant respectfully asks that the rejection of claims 47, 55, and 63 be withdrawn.

Claims 48, 56, 64

Claims 48, 56 and 64 recite that the “porous material is bonded crumb rubber and polyurethane material.” For Drury to anticipate claims 48, 56 and 64, it must disclose not only all of the elements recited in claims 45, 56, and 61, respectively, but also that the panel “is bonded crumb rubber and polyurethane material.”

Drury discloses panels made of closed-cell foam material, such as polyethylene but never teaches that it be made of bonded crumb rubber and polyurethane material. For this additional reason, Applicant respectfully asks that the rejection of claims 48, 56, and 64 be withdrawn.

Claims 49 and 57

Claims 49 and 57 recite the additional “step of blocking the movement of irrigation water at substantially all of the peripheral sides and lower surface of the panel.” For Drury to anticipate claim 49, it must disclose not only all of the elements recited in claims 45 and 46, but also the additional “step of blocking the movement of irrigation water at substantially all of the peripheral sides and lower surface of the panel.” Likewise, for Drury to anticipate claim 57, it must disclose not only all of the elements recited in claims 53 and 54, but also the additional “step of blocking the movement of irrigation water at substantially all of the peripheral sides and lower surface of the panel.”

As discussed above, Drury teaches floating the panel above the liquid nutrients, and thus Drury does not block the movement of water past the lower surface of the panel. To the contrary, Drury allows water to freely flow below the panel. For this additional reason, Applicant respectfully asks that the rejection of claims 49 and 57 be withdrawn.

Claims 50 and 58

Claims 50 and 58 recite the additional step of supplying irrigation water to the panel “at a charge rate so that the water evenly fills the panel.” For Drury to anticipate claim 50, it must disclose not only all of the elements recited in claims 45, 46, and 49, but also the additional step of supplying irrigation water to the panel at a charge rate so that the water evenly fills the panel. Likewise, for Drury to anticipate claim 58, it must disclose not only all of the elements recited in claims 53, 54 and 57, but also the additional step of supplying irrigation water to the panel is supplied at a charge rate so that the water evenly fills the panel.

Once again, as discussed above, Drury teaches liquid nutrient filling a trough 11, and *floating* the panel, but it does teach supplying water at a charge rate so that the water evenly fills the panel.” The liquid nutrient in Drury do not fill the panel at all, but instead remains below the floating panel as shown in Fig. 6A. For this additional reason, Applicant respectfully asks that the rejection of claims 50 and 58 be withdrawn.

Claims 51 and 59

Claims 51 and 59 recite “a controlled release device embedded within the panel.” For Drury to anticipate claim 51, it must disclose not only all of the elements recited in claims 45, 46, 49, and 50 but also a controlled release device embedded within the panel. Likewise, for Drury to anticipate claim 59, it must disclose not only all of the elements recited in claims 53, 54, 57, and 58 but also a controlled release device embedded within the panel.

Drury does not disclose “a controlled release device embedded within the panel.” Drury discloses an inlet 26 that is embedded in the trough 11, but not in the panel 34.

Drury's panels 34 float within the trough 11. For this additional reason, Applicant respectfully asks that the rejection of claims 51 and 59 be withdrawn.

Claims 52 and 60

Claims 52 and 60 recite that "the controlled release device is a flow regulating pressure compensated emission rate module which emits water at a controlled rate." For Drury to anticipate claim 52, it must disclose not only all of the elements recited in claims 45, 46, 49, 50, and 51 but also that the controlled release device is a flow regulating pressure compensated emission rate module which emits water at a controlled rate. For Drury to anticipate claim 60, it must disclose not only all of the elements recited in claims 53, 54, 57, 58, and 59 but also that the controlled release device is a flow regulating pressure compensated emission rate module which emits water at a controlled rate.

Drury does not disclose a flow regulating pressure compensated emission rate module which emits water at a controlled rate. For this additional reason, Applicant respectfully asks that the rejection of claims 52 and 60 be withdrawn.

Claim 67

Claim 67 recites that the plurality of "recessed openings are slits." For Drury to anticipate claim 67, it must disclose not only all of the elements of claim 61, 65, and 66, but also a plurality of slits extending into the panel from the panel's upper surface for receiving landscaped plants or flowers.

Drury discloses cylindrical holes 37 (Col. 9, line 5) formed by push-out plugs 46. Although the Examiner does not state this, Applicant assumes that the Examiner considers these holes to be recessed openings. While the Applicant does not concede that

the holes in Drury are recessed openings as claimed in the present Application, it is clear that the cylindrical holes in Drury are not slits. For this additional reason, Applicant respectfully asks that the rejection of claim 67 be withdrawn.

Claim 68

Claim 68 recites that the panel “comprises two layers of porous material, an upper layer on top of a lower layer.” For Drury to anticipate claim 68, it must disclose not only all of the elements of claim 61 and 65, but also that the panel comprises two layers of porous material, an upper layer on top of a lower layer.

Drury does not disclose that the panel is made of two layers. For this additional reason, Applicant respectfully asks that the rejection of claim 68 be withdrawn.

Claim 69

Claim 69 recites that the panel “is securable to a similar adjacent panel to enlarge the planting area.” For Drury to anticipate claim 69, it must disclose not only all of the elements of claim 61, but also that the panel is securable to a similar adjacent panel to enlarge the planting area.

Drury discloses that “[e]ach trough 11 contains a full complement of support structures 18² *which fit loosely* within the trough.” Col. 5, lines 29-31. This implies that the pallets are not secured or securable to one another. To the contrary, Figures 1 and 7 in Drury disclose pallets 18, 34 aligned side by side. However, there is no disclosure that these pallets are securable to each other. For this additional reason, Applicant respectfully asks that the rejection of claim 69 be withdrawn.

² The terms support structure and pallet are interchangeably in Drury.

Claims 70-73

Claim 70 recites that “said charge inlet is associated with both panels.” Claim 71 recites that “said charge inlet the entire upper surface of the panel.” Claim 72 recites that “said charge inlet is through the bottom surface of the panel.” Claim 73 recites that “said charge inlet is located at the peripheral side of the panel.” For Drury to anticipate any of claims 70-73, it must disclose not only all of the elements of claim 61 but also the elements of each particular claim. Claims 70-73 all require that the change inlet is somehow associated directly with the panel or panels.

Drury discloses an inlet 26 that is embedded in only the trough 11. *See* Drury Figures 1 and 6A; *See also* Drury Col. 5, lines 29-35. Drury does not disclose an inlet associated directly with the panel or panels. For this additional reason, Applicant respectfully asks that the rejection of claims 70-73 be withdrawn.

Claims 74-77

Claim 74 recites “a barrier at said peripheral sides and bottom surface of said panel said barrier being of a material substantially less porous than said panel material.” Claim 75 recites that the “barrier material is closed-cell foam.” Claim 76 recites that the “barrier material is a polymeric plastic material.” Claim 77 recites that the barrier material is impermeable.

Drury discloses a substantially impermeable and presumably less porous trough 11, but Drury does not disclose that this trough be made of closed-cell foam or a polymeric plastic material. For this additional reason, Applicant respectfully asks that the rejection of claims 75 and 76 be withdrawn.

CONCLUSION

In view of the foregoing arguments, Applicant respectfully asks that the rejections be withdrawn. Believing that all things raised in the Examiner's August 18, 2006, Office Action have been addressed, the undersigned respectfully requests that the application be allowed and passed to issue. If impediments to the allowance of claims 45-77 remain and a telephone conference between the undersigned and Examiner would help to remove such impediments, in the opinion of the Examiner, a telephone conference is requested.

Applicant includes a petition for a three-month extension of time and a check for the required extension fee. Other than this, no additional fees are believed to be required, but if any are, or if there has been any underpayment, the Commissioner is hereby authorized to deduct any required but unpaid fees from Gunn & Lee's deposit account no. 500808.

Respectfully submitted,

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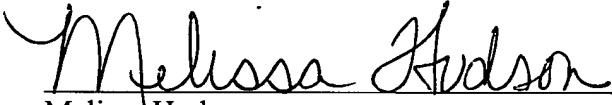
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Melissa Hudson